2014 TCTAP

Wrap-Up Interview

Fractional Flow Reserve

Moderator

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Interviewees

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Issues in Brief

Fractional Flow Reserve

- **Guidelines**
- **Clinical Studies**
- **FAME 3: FFR Guided PCI vs. CABG**

Guidelines

2011 ACCF/AHA/SCAI (Class IIa)

FFR is reasonable to assess angiographic intermediate coronary lesions (50% to 70% diameter stenosis) and can be useful for guiding revascularization decisions in patients with SIHD.
(Evidence: A)

2010 ESC (Class I)

FFR-guided PCI is recommended for detection of ischemia-related lesions when objective evidence of vessel-related ischemia is not available.

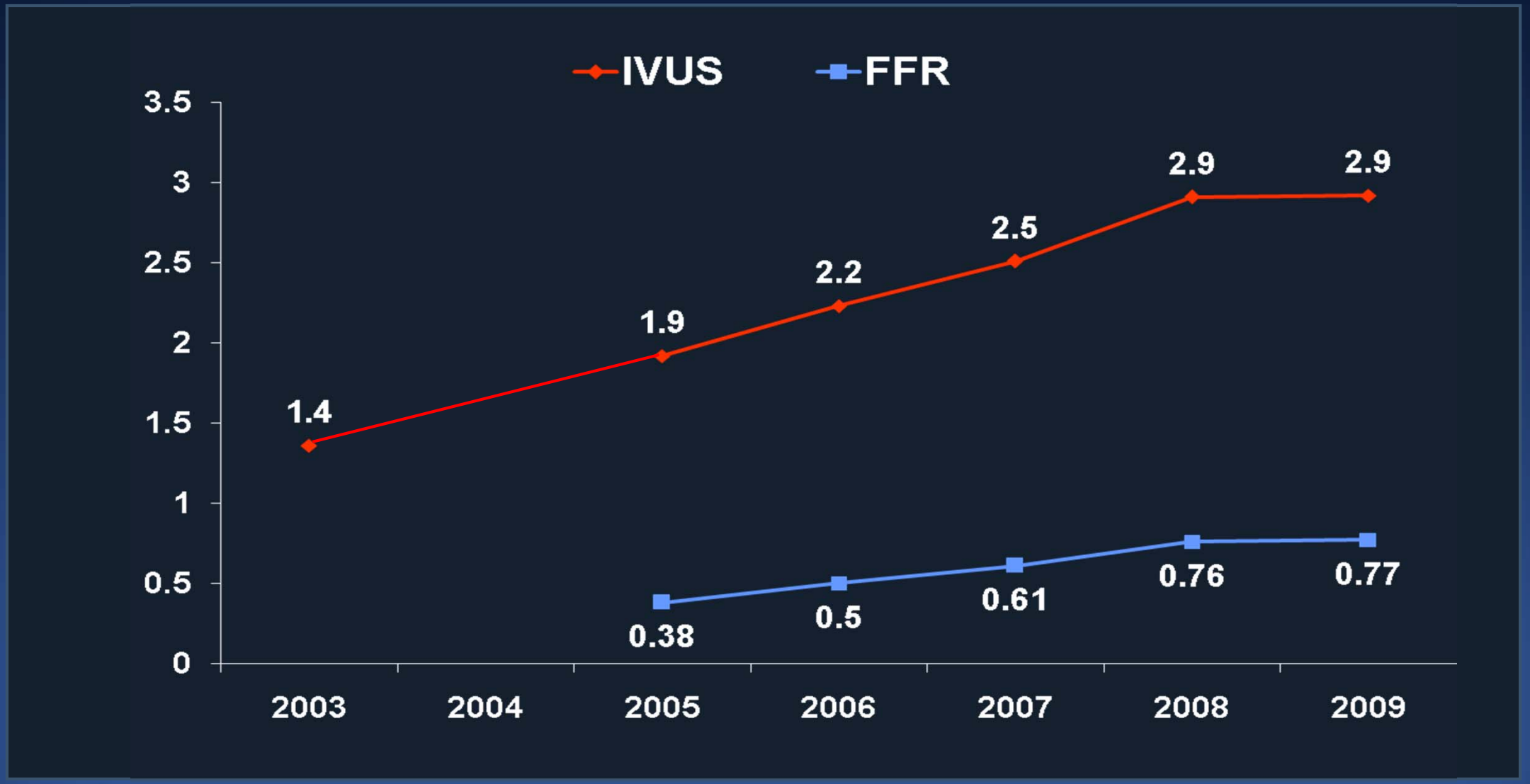
FAME: 2 yr Follow Up

- A total of 1,005 patients with multivessel CAD were randomly assigned.

	Angio-Guided N=496	FFR-Guided N=509	p value
Total no. of MACE	139	105	
Individual Endpoints			
Death	19 (3.8)	13 (2.6)	0.25
MI	48 (9.7)	31 (6.1)	**0.03**
CABG or repeat PCI	61 (12.3)	53 (10.4)	0.35
Composite Endpoints			
Death or MI	63 (12.7)	43 (8.4)	**0.03**
Death, MI, CABG, or re-PCI	110 (22.2)	90 (17.7)	0.07
Total no. of MACE	139	105	

J Am Coll Cardiol 2010;56:177–84

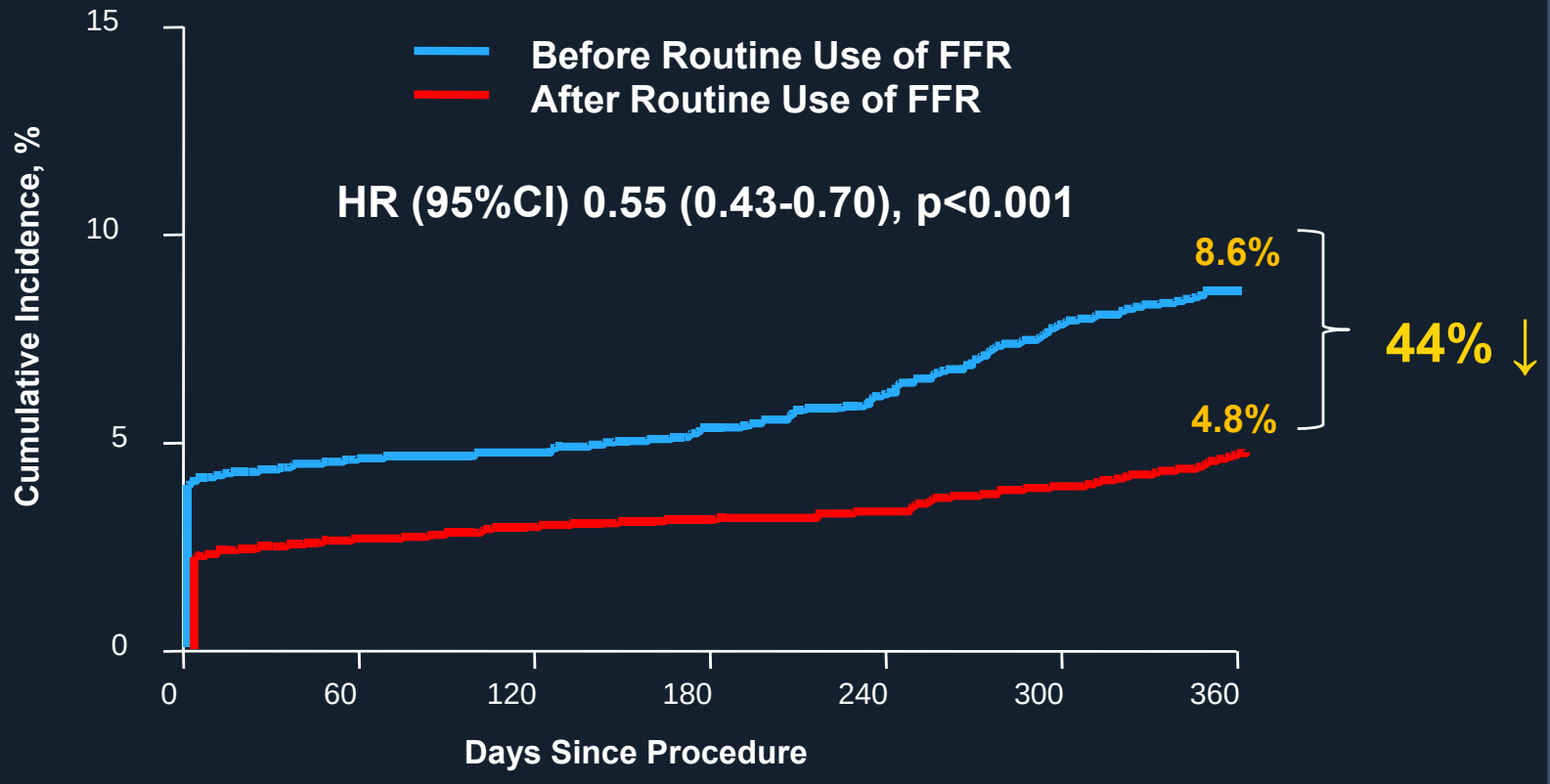
FFR Penetration Rate in Clinicl Practice



Riley RF et al. Circ Cardiovasc Qual Outcomes. 2011;4:193-197.

Impact of Routine FFR measurement In PCI cohort

Primary Endpoint (Death/MI/Repeat Revascularization)



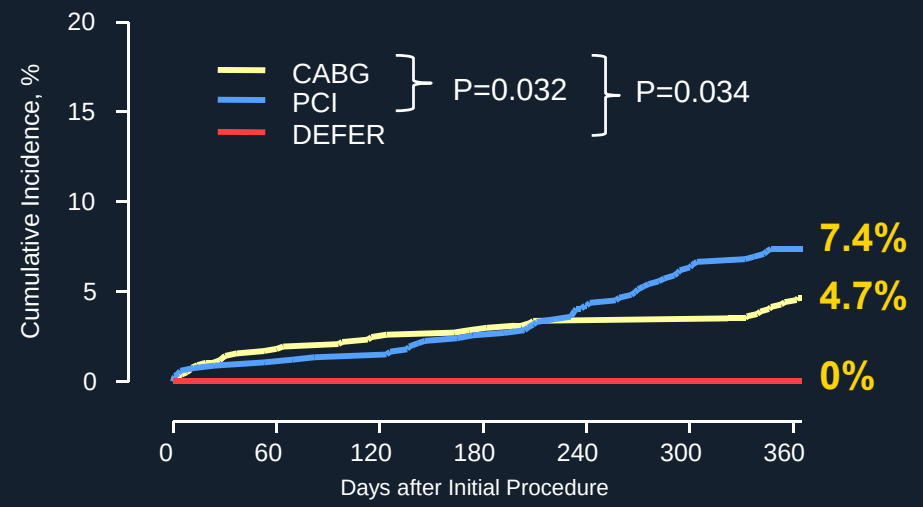
No. at Risk				
Before Routine Use	2178	2066	2011	1960
After Routine Use	2178	2092	2067	2037

Eur Heart J. 2013 Nov;34(43):3353-61

Impact of Routine FFR measurement In LM or 3VD cohort

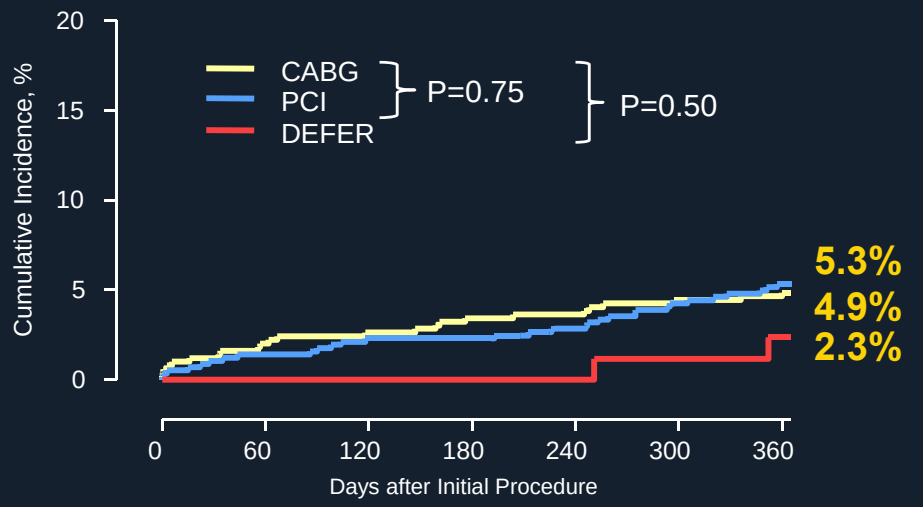
Primary Endpoint (Death/MI/Repeat Revascularization)

Before Routine FFR (2008-2009)



CABG	770	751	743	734
PCI	663	655	634	612
DEFER	34	34	34	34

After Routine FFR (2010-2011)



CABG	494	482	477	471
PCI	566	553	545	531
DEFER	85	85	85	84

Unadjusted K-M curve

FAME 3

All Comers with 3 vessel CAD
(not involving Left Main)

↓

Amenable to either PCI or CABG per Heart Team

1:1 randomization

FFR-Guided PCI with DES
Stent all lesions with FFR ≤ 0.80
(n=775)

Perform CABG based on coronary angiogram
(n=775)

Co-Primary Endpoints

- **One Year follow-up for MACCE**
- **Three Year follow-up for Death, MI, CVA**

Discussion

- Current Status of FFR
- Major Barriers to FFR Penetration
- FAME 3: FFR Guided PCI vs. CABG
- New Hyperemic Stimulants
- Future Perspectives on Functional Evaluation